



Up and Down with Elevators Kaizen Event Report Out

By:

Elevator Inspection Team

July 11-15, 2005



Background

Steve Slater

- Ten years ago, the IWD/DOL Elevator Inspection staff consisted of 9 inspectors and were responsible for the inspection of over 6,000 facilities.
- In 2005, the inspection staff had shrunk to only 4 inspectors, but the responsibility for inspection had grown to over 10,000 facilities. As a result of the limit staff, the number of elevators that receive annual inspection has dwindled to 3,800 a year. 1,500 of which are conducted by a third party inspection company, most of which are in high population areas.
- Over the last three years the number of new installations has averaged over 400 elevators a year. Timely inspections are important to economic development in the State and thus has been subject to high levels of legislative scrutiny.
- The inspection staff is also responsible for the safety of Amusement rides in Iowa. Due to the difficulty in predicting with any high level of precision the exact number of rides or the exact time of day that these units will be ready for inspection, it causes great disruption to the elevator inspection schedule.
- The new Elevator Safety Board, and a new revolving Elevator Inspection fund, have provided the necessary funding to replace two long vacant inspector positions and provide a new Manager position.
- This event was developed to review the existing processes and ensure that the division uses its limited resources in the most efficient manner.



Team Members

Scott Vander Hart

- Ann Buck, Secretary, Elevator Inspections
- Bob Lilland, Elevator Inspector
- Gregg Rogers, Elevator Union Member
- Rick Monthie – St Luke's Hospital/Cedar Rapids - BOMA member
- Marvin Schumacher – Elevator Safety Board Chair, President & CEO, Shumacher Company
- Ljerka Vasiljevic – Fire Marshall's Office/Building Code
- Rich Bolten – Public Safety
- Jeff Harden – Iowa Association of Building Officials
- Jeff Junker – Iowa Association of Building Officials
- Steve Slater – Deputy Commissioner of Labor
- **Team leader** – Scott Vander Hart, DNR
- **Sub-team leader** – Kathleen Uehling, Attorney for Labor Commissioner.
- Missy Kain, Ruth Coleman, James Quinn, Sudhir Vemuri, Cheryl Kelce



Objectives

Kathleen Uehling

- Improve scheduling to minimize multiple trips within short timeframes.
- Standardize the process and establish takt time.
- Improve client understanding of permit application and inspection process to reduce amount of re-work.
- Reduce non-value added work, balance work loads and document resource requirements



Goals

Steve Slater

- Reduce plan review lead times from 45.5 calendar days to 14 calendar days
- Reduce waste (process steps, hand-offs, delays, decisions, rework) by 50%
- Reduce Annual Permit Inspection backlog by 25%
- Reduce scheduling lead time from 45 to 10 days
- Eliminate failed initial inspection attempts



Kaizen Methodology

Scott Vander Hart

- Clear objectives
- Team process
- Tight focus on time
- Quick & simple
- Necessary resources immediately available
- Immediate results (new process functioning by end of week)
- 5S “mindset”, use the steps to support the event activities



Old Process(s)

Bob Lilland

- A lot of mailing and paper handling.
- Applications spent time passing thru accounting along with the checks.
- Forms were out of date, some not revised since 1976.
- Things were stacking up.
- Lead times were growing and over 5,500 elevators were passed due annual inspections. Some up to five years.



New Process

Rick Monthie

- Leaned it out!
- Updated and reduced number of forms from 7 to 3
- Replaced time consuming snail mail processes with email and electronic forms.
- Reduced amount of paper passing through process.
- Took accounting processing from the critical path.
- New elevators records will be electronic rather than paper.



Results

Plan Review Process

Gregg Rogers

	Old	New	% Change
# of Steps	58	23	57.6%
# of Handoffs	14	5	64.3%
# of Decisions	9	4	55.6%
# of Delays	13	4	69.2%
Lead Time	45.5 Days + Mail time	10.25 days	77.5%
% of Value-Add	.1%	.6%	500%



Results

Acceptance Inspection Process

Ann Buck

	Old	New	% Change
# of Steps	74	25	66.2%
# of Handoffs	10	5	50%
# of Decisions	13	6	53.8%
# of Delays	20	2	90%
Lead Time	73.5 -103.5 days	2.5 - 4.5 days	96.6% - 95.6%
% of Value-Add	2.1%	6.25%	297%

Results

DOL Annual Inspection Process

Ljerka Vasiljevic

	Old	New	% Change
# of Steps	71	67	5.6%
# of Handoffs	8	8	0%
# of Decisions	10	10	0%
# of Delays	14	14	0%
Lead Time	768 days	768 days	0%
% of Value-Add	.00000000	.0000000	0%



Implemented

Gregg Rogers

- Elevator inspection Lotus Notes Mailbox established to allow electronic scheduling and notification of contractor. Eliminates manual schedule log and creation of word file.
- Electronic Plan Review Backlog report to replace manual log book and provide KPIV reporting.
- Eliminated copying of permit application & invoices for check processing.
- E-mail Monthly Annual Inspection report to Inspectors in field.



Homework

Steve Slater

Item	Item Description	Person Responsible	Due Date
1	Meet with Treasurer to discuss electronic payment	Steve Slater	July 18
2	Finalize Combined Application/2A/2B & Create Electronic Edition	Kathleen Uehling	July 25
3	Finalize New Safety Test Forms 3 & 5 Format	Kathleen Uehling	July 25
4	Distribute new forms	Kathleen Uehling	July 25
5	Training for inspectors on new process and calendar	Steve Slater	July 26
6	Migrate access plan review backlog	John Helbling	July 15
7	Obtain Adobe Acrobat or Adobe Elements (Enterprise) on Ann's and Inspectors Computers	Steve Slater	July 27
8	Electronic Approval Notice of Plans	Kathleen Uehling	July 22



Homework

Steve Slater

Item	Item Description	Person Responsible	Due Date
9	Inspection/Installation Check List	Marvin Shumacher	August 9
10	Establish owner mail slip with operating permit printing	John Helbling/Ann Buck	July 22
11	Establish Key Metrics Reports	Steve Slater/John Helbling	August 15
12	Bring new Inspector resources on line	Steve Slater	July 29
13	Establish different procedures for Major and Minor Deficiencies	Bob Lilliand/Steve Slater	August 15
14	Complete new SOP documentation	Steve Slater	July 27
15	Complete documentation of New Process Maps	Julie Chang	August 15
16	Submit request to change retention schedule	Steve Slater	August 15
17	Schedule 30-60-90 days	Steve Slater	July 22
18	Provide Best of Class fillable forms	Gregg Rogers	July 22



Homework

Steve Slater Communication Plan

Item	Item Description	Person Responsible	Due Date
19	Elevator Board Presentation	Marvin Shumacher/Kathleen Uehling	August 9
20	Elevator Industry Notification	Steve Slater	July 25
21	Financial Management Notification	Steve Slater	July 22
22	Include in DOL Quarterly Newsletter	Dave Neil	September
23	Issue "Workforce Wednesday" information releases	Dennis Schwartz	August 15
24	IWD CQI committee report out	Dave Neil	July 28
25	Monday Staff Meeting with IWD Senior Management	Steve Slater	July 18



Parking Lot

Ljerka Vasiljevic

- Resolve incompatible codes.
- Provide dedicated resource for Priority Plan Review (New manager will fill this role).
- Work with Treasury, Financial Management, DRF and others to expedite funds transfer.
- Finalize a review/variance process (Board)
- Provide different/ more expedient treatment of alteration permits for certain types of repairs (Board).
- Elevator company to complete and witness acceptance safety test forms (Board).
- Establish fee for inspection for Construction Permit. (Board)
- Establish Web/Electronic Submittal with Credit Card Payments
- Annual inspection process needs to be reviewed after new staff is in place.



Team Member's Experience

Marvin Schumacher



Comments

John Helbling



We welcome your
questions and comments!

